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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/573,026

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EXAMINER

UHLIR, CHRISTOPHER J

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/573,026	Applicant(s) ARZABALA, ROBERTO RIBER	
	Examiner CHRISTOPHER UHLIR	Art Unit 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>03/22/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following limitations must be shown or the features canceled from the claim(s). No new matter should be entered.

- T-shaped part as stated in claims 9 and 10
- At least one hole in the T-shaped part as stated in claim 10

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character “8” has been used to designate both the blow tube and the vibrating strip.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claim 2 is objected to because of the following informalities: The phrase "drawn in" was not sufficiently described applicant's specification as to determine exactly what the phrase pertains to. For examining purposes, as best understood by examiner, the phrase "drawn in" is interpreted as meaning positioned closer to the center point of a body. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4, 6, 7, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gyorgy (US 5,662,064) in view of Piltz (US 4,913,306).

Regarding claim 1, Gyorgy discloses a horn 10 shown in Fig. 1 to have a blow tube or pressure tube 14 where air is blown into a pressure chamber or clearance 21 (column 3 lines 20-21). This figure further shows an acoustic chamber formed by sound

tube 11 coaxial with said pressure chamber 21, formed by tube 14 (column 3 lines 2-4). Gyorgy further discloses a strip or membrane 22, further shown in Fig. 1 to be coaxial with said acoustic chamber and fixed at its periphery to a free end of the partition of tube 14, enclosing said pressure chamber 21. This reference further discloses said strip 22 to be commonly made of metal in the prior art (column 1 lines 24-26), but describes the use of a strip 22 made out of plastic or polyethylene (column 3 lines 15-16). Gyorgy fails to explicitly disclose that the vibrating metal strip is made of a plastic coated aluminum.

However Piltz teaches an end closure being a flexible strip or membrane being made of plastic coated aluminum (column 3 lines 40-43).

Given the teachings of Piltz, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the horn disclosed by Gyorgy with the vibrating metal strip to be made of plastic coated aluminum. It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In *re Leshin*, 125 USPQ 416. Doing so would provide a weather proof covering, where the sound can be adjusted through varying the thickness of the aluminum used.

In reference to claim 2, Gyorgy modified by Piltz discloses a horn as stated above, where Fig. 1 of Gyorgy shows the opening of the partition of pressure chamber 21 where the vibrating strip 22 is fixed to being positioned closer to the center point of said pressure chamber 21, with respect to the free end of the cylindrical tube 14 forming the pressure chamber 21.

In reference to claim 3, Gyorgy modified by Piltz discloses a horn as stated above, where Gyorgy further discloses a sound tube to have a tubular and cylindrical area and configures the acoustic chamber, as can be seen from Fig. 1. This figure further shows a cap-shaped area configuring the pressure chamber 21, which envelopes and is coaxial with the sound tube 11. Gyorgy modified by Piltz fails to explicitly disclose the acoustic chamber and the pressure chamber to be formed of one piece.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the acoustic chamber and pressure chamber out of one piece, since it has been held that making various elements into an integral structure involves only routine skill in the art. In *re Larson*, 340 F.2d 965,968,144 USPQ 347,347 (CCPA 1965). Doing so would provide a more efficient and cost-effective manufacturing process for mass production of the horn.

In reference to claim 4, Gyorgy modified by Piltz discloses a horn as stated above, where Gyorgy further discloses as shown in Fig. 1, a portion of the body or additional tube 18 forming the acoustic chamber is opposite the pressure chamber 21, and adopts a bell-mouthed configuration divergent toward its free end.

In reference to claim 6, Gyorgy modified by Piltz discloses a horn as stated above, where Piltz further discloses the vibrating metal strip to be fixed by means of heat sealing (column 1 lines 60-63).

In reference to claim 7, Gyorgy modified by Piltz discloses a horn as stated above, where Gyorgy further discloses the opening of the partition forming pressure

chamber 21 to have a groove or step 25 on part of the surface of its edge, as can be seen from Fig. 1. Said groove 25 favors the attachment of the vibrating metal strip 22 (column 3 lines 21-24).

In reference to claim 13, Gyorgy modified by Piltz discloses a horn as stated above, where Gyorgy further discloses a ring 24, as can be seen from Fig. 1.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gyorgy (US 5,662,064) modified by Piltz (US 4,913,306) as applied to claim 1 above, further in view of Larkin et al. (US 5,860,743). Gyorgy modified by Piltz discloses a horn as stated above, where Piltz discloses the vibrating metal strip to be welded to the free end or end closure (column 1 lines 40-43). These references fail to explicitly disclose the use of ultrasonic welding.

However Larkin et al. teaches a flexible aluminum sheet covered with plastic, where a means of ultrasonic welding or sealing is used to secure (column 2 lines 46-50).

Given the teachings of Larkin et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the horn disclosed by Gyorgy as modified by Piltz with using a means of ultrasonic welding. Doing so would provide an easy and inexpensive method of securing the flexible metal strip, as taught by Larkin et al. (column 1 lines 39-41).

7. Claims 8, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gyorgy (US 5,662,064) modified by Piltz (US 4,913,306) as applied to claim 1 above, further in view of LeBlanc et al. (US 4,970,983).

In reference to claim 8, Gyorgy modified by Piltz discloses a horn as stated above where the vibrating membrane 22 is held by a retaining ring 24 (column 3 lines 21-23), as can be seen from Fig. 1. These references fail to explicitly disclose an extension of the partition forming the pressure chamber in its outer area being bent over the vibrating membrane.

However LeBlanc et al. teaches a horn shown in Fig. 1 to have an extension of a partition forming pressure chamber 62, having an outer area being bent over a membrane or back 26.

Since these references pertain to a horn, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the horn disclosed by Gyorgy as modified by Piltz with an extension of the partition forming the pressure chamber in its outer area to be bent over the vibrating membrane as taught by LeBlanc et al. Doing so would provide a method of removably fixing said vibrating membrane to the horn through frictional engagement with the retaining ring and extension.

In reference to claims 11 and 12, Gyorgy modified by Piltz discloses a horn as stated above, but fails to explicitly disclose the cap to be semi-spherical, or semi-ellipsoidal.

However LeBlanc et al. teaches a horn shown in Fig. 1 to have a cap that is semi-spherical in shape. This figure further shows the interior of said cap to be semi-ellipsoidal.

Since these references pertain to a horn, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the horn disclosed

by Gyorgy as modified by Piltz with a cap being semi-spherical or semi-ellipsoidal as taught by LeBlanc et al. It has been held that a mere change in shape is generally within the level of ordinary skill in the art. In *re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). Doing so would change the appearance of the horn which would appeal to different consumers, therefore increasing sales.

8. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gyorgy (US 5,662,064) modified by Piltz (US 4,913,306) as applied to claim 1 above, further in view of Belli (US 5,600,080).

In reference to claim 9, Gyorgy modified by Piltz discloses a horn as stated above, but fails to disclose a T-shaped part connected to blow tubes for removably coupling two bodies.

However Belli teaches a T-shaped part or mounting apparatus between two bodies or drums as shown in Fig. 4. Said T-shaped part is shown in Fig. 5 to be attached to a body through opening 26, and said bodies can be removed from said T-shaped part through adjusting screw 24.

Given the teachings of Belli, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the horn disclosed by Gyorgy as modified by Piltz with a T-shaped part connected to blow tube holes for removably coupling two bodies. Doing so would provide an apparatus to mount two bodies while allowing easy and quick removal as taught by Belli (column 2 lines 49-51).

In reference to claim 10, Gyorgy modified by Piltz, further modified by Belli discloses a horn having a T-shaped part as stated above. Belli further shows in Fig. 5

said T-shaped part to have at least one hole for receiving mounting rod 28 and its respected screw.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. A list of pertinent prior art is attached as form 892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER UHLIR whose telephone number is (571)270-3091. The examiner can normally be reached on Monday-Thursday 8:00am-6:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on 571-272-1988.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CHRISTOPHER UHLIR/
Examiner, Art Unit 2837
May 16, 2008

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/Lincoln Donovan/

Supervisory Patent Examiner, Art Unit 2837